

In the claims:

1. (Currently amended) A method for purifying preparing a plasmin solution comprising:
cleaving a plasminogen in the presence of a plasminogen activator to yield an active plasmin;
substantially removing the plasminogen activator from the active plasmin by binding the active plasmin to an active plasmin-specific absorbent material to form a bound plasmin, and eluting the bound plasmin with an excipient solution having a pH from about 2.5 to about 9.0 to form a plasmin solution; and
buffering the plasmin solution with a low pH, low buffering capacity agent to form a reversibly inactive acidified plasmin solution having a pH of approximately 1 to 4.
2. (Original) The method of claim 1, wherein the excipient solution has a pH from about 4.0 to about 7.5.
3. (Original) The method of claim 1, wherein the excipient solution has a pH of about 6.0.
4. (Original) The method of claim 1, wherein the active plasmin-specific absorbent material comprises benzamidine.
5. (Original) The method of claim 1, wherein the plasminogen activator is further removed by hydrophobic interaction.
6. (Original) The method of claim 1, further comprising nanofiltration of the plasmin solution.
7. (Original) The method of claim 6, wherein the nanofiltration is carried out using a filter membrane characterized by an average pore size of approximately 15 nm.
8. (Original) The method of claim 1, wherein the plasminogen is cleaved in the presence of at least one excipient that is an omega-amino acid.

9. (Original) The method of claim 1, wherein the plasminogen is cleaved in the presence of at least one omega-amino acid selected from the group consisting of lysine, epsilon amino caproic acid, tranexamic acid, poly lysine, arginine, and combinations thereof.
10. (Original) The method of claim 1, wherein the plasmin is eluted in a solution comprising at least one salt, the solution having a conductivity from about 5 mS to about 100 mS.
11. (Original) The method of claim 10, wherein the at least one salt is sodium chloride.
12. (Original) The method of claim 11, wherein the sodium chloride is present at a concentration of from about 50 mM to about 1000 mM.
13. (Original) The method of claim 11, wherein the sodium chloride is present at a concentration of about 150 mM.
14. (Original) The method of claim 1, wherein the plasminogen is cleaved using a catalytic concentration of a plasminogen activator that is selected from the group consisting of immobilized plasminogen activators, soluble plasminogen activators, and combinations thereof.
15. (Currently amended) The method of claim 1, wherein the plasminogen activator is selected from the group consisting of streptokinase, urokinase, ~~tPA~~ tissue plasminogen activator and combinations thereof.
16. (Original) The method of claim 1, wherein the plasminogen activator is soluble streptokinase.
17. (Currently amended) The method of claim 1, wherein the plasminogen activator is immobilized on a solid support medium comprising ~~SEPHAROSE~~ a beaded form of agarose gel.
18. (Original) The method of claim 1, wherein the low pH, low buffering capacity agent comprises a component selected from the group consisting of an amino acid, a derivative of at

least one amino acid, an oligopeptide which includes at least one amino acid, and combinations thereof.

19. (Currently amended) The method of claim 1, wherein the low pH, low buffering capacity agent comprises a component selected from the group consisting of acetic acid, citric acid, hydrochloric acid, carboxylic acid, lactic acid, malic acid, tartaric acid, benzoic acid, serine, threonine, methionine, glutamine, alanine, glycine, isoleucine, valine, ~~alanine~~, aspartic acid, ~~derivatives thereof~~, and combinations thereof.

20. (Original) The method of claim 1, wherein the buffer is present in the reversibly inactive acidified plasmin at a concentration at which the pH of the acidified plasmin is raised to neutral pH by adding serum in an amount no more than about 5 times the volume of the acidified plasmin.

21. (Original) The method of claim 1, wherein the reversibly inactive acidified plasmin solution has a pH between about 2.5 to about 4.

22. (Original) The method of claim 1, further including stabilizing the reversibly inactive acidified plasmin by adding a stabilizing agent selected from the group consisting of a polyhydric alcohol, pharmaceutically acceptable carbohydrates, salts, glucosamine, thiamine, niacinamide, and combinations thereof.

23. (Original) The method of claim 22, wherein the salts are selected from the group consisting of sodium chloride, potassium chloride, magnesium chloride, calcium chloride and combinations thereof.

24. (Original) The method of claim 1, further including stabilizing the reversibly inactive acidified plasmin by adding a sugar or sugar alcohol selected from the group consisting of glucose, maltose, mannitol, sorbitol, sucrose, lactose, trehalose, and combinations thereof.

25-53. (Cancelled).